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09/719,903	12/20/2000	Stefan Etzold	ETZOLD ET AL	7099

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Collard & Roe
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EXAMINER

SALVATORE, LYNDIA

ART UNIT

PAPER NUMBER

1771

14

DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/719,903

Applicant(s)

ETZOLD ET AL.

Examiner

Lynda M Salvatore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment and accompanying remarks, Paper No. 12, has been entered and carefully considered. Claims 1-5,8,9,11-13,17, and 19-24 have been amended. Additionally, Applicant's newly amended specification has been entered. Applicant's amendments and remarks have been found persuasive to overcome the claim objections set forth in sections 3-6 of the last Office Action. As such, these objections have been withdrawn. Applicant's amendment to claims 8 and 9 now renders moot the objection to the drawings as set forth in section 7 of the last Office Action. Thus, the drawing objections are withdrawn. Applicant's amendments and accompanying remarks are found sufficient to overcome the 35 U.S.C. 112 second paragraph rejections set forth in sections 10-13 and prior art 35 U.S.C. 102/103 rejections as set forth in section 18 of the last Office Action. Thus, these rejections are withdrawn. Despite this advance however, Applicant's amendments and accompanying are not found to patently distinguish the claims over the prior art and new grounds rejection is set forth herein below.

Claim Rejections - 35 USC § 112

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 12 and 17 stand rejected under 35 U.S.C. 112, second paragraph as set forth in sections 14 and 15 of the last Office Action. It appears that the Applicant inadvertently failed to amend these claims to overcome the lack of antecedent basis.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1,2,9,13, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 1,287,063.

The published patent specification, GB 1,287,063 teaches a method and apparatus to form a perforated non-woven web (Title). The method includes passing a non-woven fabric between a roller and a perforated belt (Column 4, 75-73). The method also includes providing an air supply in an upward direction to blow any fibers or fleece, which may have been carried along by the needle (Column 4, 85-95). The perforating apparatus includes a perforating roller comprising conical shaped barbs and a receiving roller with indentions to receive said barbs (Figures 2 and 3). The published patent specification also teaches further consolidating the perforated non-woven. Specifically, the GB reference teaches that the directly following the perforating step the fabric can be dried, impregnated, and strengthened to a greater or lesser extent, while the perforations are mainly retained (Column 1, 25-30). Accordingly, it is widely known in the art that such final consolidation imparts mechanical stability and strength to the non-woven fabric.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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7. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1,287,063 as applied to claim 1 above.

With respect to claims 14 and 15 the GB reference teaches conical tips as the perforating means instead of having an involuted or ogival cross section. It would have been obvious to one of ordinary skill in the art to use barbs of different shapes to produce fibrous webs having hole properties. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice because those shapes would also be capable of producing a patterned perforated fibrous web. *In re Leshin*, 125 USPQ 416.

8. Claims 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1,287,063 in view of Siegers, DE 3416004 as applied to claim 1, and further in view of Karger et al., Patent Specification 1224786.

With regard to claim 12, the published patent specification, GB 1,287,063 fails to teach a lowering and raising plate, however, the invention disclosed by Karger et al. relates to fabricating high strength fiber sheets having holes or apertures (Column 1, lines 10-14). According to one aspect of the invention the fleece is placed in a mould and perforated by means of a perforating device (Page 5, lines 5-10). The perforation device generally comprises mandrels having conical tips, a compressing spring, a retaining plate, a rubber plate, and a pressure plate as a suspended assembly above the raster hole plate (Figure 2, Page 5 lines 5-40). In practice the perforating plate assembly device descends and penetrates the fleece by its mandrels (Page 5, lines 21-25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the equivalent and known means of the lowering and raising plate taught by Karger et al., to aperture the non-woven fabric of Siegers.

With respect to claim 8 Karger et al., further discloses the use of a fan beneath the raster hole plate which functions to suck an air stream through the holes during perforation to secure the fleece to the hole plate. Alternatively, the direction of airflow may be reversed by a pivoting air flap element (Page 5, lines 15-17, Figure 2).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the equivalent and known means of use a vacuum source as taught by Karger et al., to secure the fleece to hole plate and remove stray fibers around the perforations in the non-woven fleece taught by Siegers.

9. Claims 11,16,19,20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1,287,063 in view of Siegers, DE 3416004 as applied to claim 1 above, and further in view of Whitehead et al., EP 0214608

The combination of GB reference and Siegers fails to teach the limitations of claims 11, 16 and 19-21, however, the European patent application is directed to apertured non-woven webs made from uniform spun-bonded non-woven webs, bonded carded webs, or coform materials (Title, Page 5, line 29 and 35, Page 6. line 11). Also incorporated by reference into EP 0214608 is US 4,397,644, a sanitary napkin cover. The non-woven web material is a thermoplastic web having an open structure.

With respect to claim 11, Whitehead discloses and illustrates in figure 14 a perforating roller device having a series of pins and another circular member having a series of indentions

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capable of receiving the pins. It would have been obvious to one having ordinary skill in the art to optimize the diameter size of the roller to control the production speed. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

Claim 16 limits the height of the barbs to .5-5mm. Whitehead et al., teaches a pin height of .031 to .05 in figures 7 and 8. It would have been obvious to one having ordinary skill in the art to optimize the size of the pin/barb as a function of the fleece thickness i.e., single-layer or multi-layer. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

Claim 19 limits the diameter of the hole size to a range of .5-5mm. Whitehead et al. teaches hole diameters of approximately .005 inch. It would have been obvious to one having ordinary skill in the art to optimize the diameter of the hole size to create a material of desirable porosity. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

Claim 20 and 21 limits the bonding the surface to 3-40% and the number of bonding points to a range of 20-120 per square centimeter. Whitehead et al. teaches the degree of perforation on the non-woven web may range for about 20-55% of the available surface area (Page 18, lines 21-24). Whitehead et al. further teaches the design pattern for apertured holes on a sanitary napkin do not extend the full width. The aperturing is generally about .75 inch to 2.0

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wide on each side (Page 21, lines 20-25). It would have been obvious to one having ordinary skill in the art to optimize the percent of bonding surface as well as the number of bonding points to, prevent the material from possibly returning to its original configuration, add texture or give the web some specialized functionality. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

10. Claims 22 and 23 are rejected under under 35 U.S.C. 103(a) as being unpatentable over GB 1,287,063 in view of Siegers, DE 3416004 as applied to claim 1 above, and further in view of Griswold et al., US 3,081,515.

Claims 22 and 23 limit the shape of the hole structures and the distance between individual hole structures. Figures 14,16 and 18 of the Griswold et al. patent illustrate a pattern of non-circular hole structures. Figures 26 and 27 illustrate a pattern of irregular hole structures. It would have been obvious to one of ordinary skill in the art to arrange barbs of different geometrical shapes to produce fibrous webs having irregular configurations and shapes. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice because those shapes would also produce a non-woven web capable of functioning in the same manner as specified by the applicant. *In re Leshin*, 125 USPQ 416.

11. Claims 19-24 are rejected under under 35 U.S.C. 103(a) as being unpatentable over GB 1,287,063 in view of Siegers, DE 3416004 as applied to claim 1 above, in view of Srinivasan et al., US 5,830, 555.

The patent is directed to an apertured non-woven fabric comprising one or two outer webs and a film layer sandwiched between (Abstract). A calendar roll simultaneously generates apertures to the passing non-woven web as well as providing heat and pressure to bond the layers together. (Abstract and Figure 2). Srinivasan et al. discloses that the typical aperture area of a non-woven web is 1-50%, however it may be tailored as needed to any shape, size, open area percentage by modifying the calendar roll, bond pattern or process (Column 8, lines 7-14 and Table 5). Figures 9-12 illustrate samples of apertured non-woven fabrics having circular, oval, or diamond shapes. The aperture size and width disclosed by Srinivasan et al. vary from .5-2.5 mm and .25-1.0 mm respectively. Srinivasan et al. further discloses that apertures of larger size are under development (Column 8, lines 17-20 and Table 5). Motivated by the production process capabilities taught by Srinivasan et al., it would be obvious to one of ordinary skill in the art to further modify the process of claim 1 to produce an equivalent product having a desired functionality.

Allowable Subject Matter

12. Claims 3-6 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Specifically, the prior art of reference fails to teach the additional pre-bonding and thermo-bonding limitations set forth. An updated art search produced no new substantial art for which to base a rejection and presently there is no motivation to combine references to form an obvious type rejection.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M Salvatore whose telephone number is 703-305-4070. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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August 11, 2003



ELIZABETH M. COLE
PRIMARY EXAMINER